



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/326,035	06/04/1999	BRADLEY CAIN	2204/157	3619

34845 7590 03/18/2004

STEUBING AND MCGUINNESS & MANARAS LLP  
125 NAGOG PARK  
ACTON, MA 01720

EXAMINER

ZHEN, LI B

ART UNIT	PAPER NUMBER
----------	--------------

2126

DATE MAILED: 03/18/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

8

# Office Action Summary

Application No.

09/326,035

Applicant(s)

CAIN ET AL.

Examiner

Li B. Zhen

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1 – 36 are pending in the application.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1 – 36 have been considered but are moot in view of the new ground(s) of rejection.

***Specification***

3. Applicant provided a list of co-pending applications [p. 1, line 8 – p. 2, line 9]. These are not checked. Applicant is invited to inform the examiner if any of the co-pending applications are particularly relevant to/conflicting with the current application. Applicant is required to maintain a clear line of demarcation between applications. See MPEP § 822.
4. The applicant recites a number of references by the attorney docket numbers [p. 1, line 8 – p. 2, line 9]. Please update the docket numbers into U.S. application serial numbers.
5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 18 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 18 recites the limitation "the interface as defined by claim 12" in line 1 and claim 30 recites the limitation "the computer program product as defined by claim 23" in line 1. Claim 12 discloses a method and claim 23 discloses an apparatus. There are insufficient antecedent basis for these limitations in the claims.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1 – 11, 13 – 23, and 25 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent NO. 6,539,435 to Bolmarcich in view of U.S. Patent NO. 5,911,066 to Williams.**

11. As to claim 1, Bolmarcich teaches the invention substantially as claimed including a method of establishing communication between a first application [client

program 10, Fig. 2] an a second [server program 12, Fig. 2] application [establishing interprogram communication between two programs; col. 3, lines 20 – 30], the second application executing on a platform [communication is established between the two parallel programs, which can be either two peer programs, or a parallel client and a parallel server; col. 3, lines 28 – 45], the method comprising:

forwarding a notify message to the second application [a task of the client (active) program makes a function call requesting to connect to the server (passive) program; col. 7, lines 23 – 40], receipt of the notify message by the second application [receives the connection request, the program manager of the server sets a semaphore at each of the server tasks; col. 7, lines 45 – 56] causing the second application to ascertain path data for establishing a path between the first application and the second application [server program manager sees that all server tasks have updated their routing tables, either by polling all the semaphores, or by receiving update messages from all the server tasks; col. 8, lines 18 – 25];

the first application ascertaining path data for establishing the path between the first application and the second application [to locate the server program manager, the client may first have to inquire of the central manager the location of the server program manager; col. 7, lines 40 – 55]; and

the first application and second application establishing a the path between the first application and the second application [establishing interprogram communication between two programs; col. 3, lines 20 – 30] after the path data is ascertained by the first application and the second application [receipt of a message from a client task

completes an implicit notification of the server tasks that the client tasks are now ready to receive messages from them, step 122 and 124, Fig. 1B; col. 8, lines 25 – 65].

As to a unique identifier to name the path, Bolmarcich teaches message passing systems requires a mapping between logical address information, such as task number and identifier, and physical address information, such as a port number, node number or IP address. Bolmarcich also teaches supporting different types of messages [some form of message passing, such as the IBM MPL message passing library provided for the IBM SP2 computer; col. 3, lines 27 – 46].

12. Although, Bolmarcich teaches the invention substantially, Bolmarcich does not teaches a unique identifier associated with a specific type of information to be transferred on the path.

However, Williams teaches establishing communications between a first and second application [uniform data transfer mechanism that may be used by any computer program to transfer data; col. 3, line 65 – col. 4, line 15], forwarding notify messages to request connections [a client requests specific characteristics for a data transfer, the client is said to be requesting data according to the preferences of the client; col. 6, lines 1 – 67] including a unique identifier [advisory connection handle is used by the client to uniquely identify an advisory connection; col. 12, lines 33 – 45] associated with a specific type of information to be transferred on the path in the notify message [FORMATETC structure is used to request or define the format and aspect ("characteristics") of the data being transferred; col. 6, lines 1 – 67], ascertaining path data [ppenumAdvise parameter for the EnumDAdvise method is a pointer to a pointer to

a list of structures containing connection information for all connections on an object; col. 13, lines 9 – 20] and establishing a connection between the first and second application [DAdvise method of the IDataObject interface allows a client to establish an advisory connection between an object and an advisory sink; col. 11, lines 25 – 46].

13. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of including a unique identifier associated with a specific type of information to be transferred on the path in the notify message as taught by Williams to the invention of Bolmarcich because this allows connections to support different data formats and provides a robust and flexible interface into the uniform data transfer mechanism so that computer programs may make easy and efficient use of the uniform data transfer mechanism [col. 4, lines 1 – 13 of Williams].

14. As to claim 2, Bolmarcich as modified teaches forwarding a reply message to the first application, the reply message notifying the first application that the second application is executing [server program manager sees that all server tasks have updated their routing tables...it then informs the client program manager that the server side of the connection is complete, block 112 Fig. 1A; col. 8, lines 18 – 25 of Bolmarcich].

15. As to claim 3, Bolmarcich as modified teaches, the first application ascertains the path data after receipt of the reply message [client program manager ensure that all

Art Unit: 2126

client tasks have requested the connection, block 114, Fig. 1B; col. 8, lines 25 – 52 of Bolmarcich].

16. As to claim 4, Bolmarcich as modified teaches, the first application forwarding a first ready message to the second application [a task of the client (active) program makes a function call requesting to connect to the server (passive) program; col. 7, lines 23 – 40 of Bolmarcich], the second application forwarding a second ready message to the first application [server program manager sees that all server tasks have updated their routing tables...it then informs the client program manager that the server side of the connection is complete, block 112 Fig. 1A; col. 8, lines 18 – 25 of Bolmarcich], and forwarding messages between the first and second application via the path after receipt of each ready message [pass messages between client and server, block 124, Fig. 1B; col. 8, lines 25 – 67 of Bolmarcich].

17. As to claim 5, Bolmarcich as modified teaches the first application and the second application establish a path by ascertaining the path data from a configuration file [routing table] that includes the path data [mapping is contained in some form of routing table...the routing table is set up when the parallel program is initiated to allow the tasks of the program to communicate among themselves; col. 3, lines 45 – 57 of Bolmarcich].



18. As to claim 6, Bolmarcich as modified teaches the path data is retrieved from the configuration file by the first application and the second application [routing table 24, implemented as part of a MPL 22, that controls which nodes the node with which it is associated can communicate... the routing table will attach to all messages a destination address; col. 5, lines 43 – 57 of Bolmarcich].

19. As to claim 7, Bolmarcich as modified teaches, the path data is retrieved from the configuration file by a path function [a routing table 24, implemented as part of a MPL 22, that controls which nodes the node with which it is associated can communicate; col. 5, lines 40 – 57 of Bolmarcich] that forwards a path message to the first application and the second application, the path message including the path data [routing table 24, implemented as part of a MPL 22, that controls which nodes the node with which it is associated can communicate... the routing table will attach to all messages a destination address; col. 5, lines 43 – 57 of Bolmarcich].

20. As to claim 8, Bolmarcich as modified teaches each message forwarded between applications includes data identifying the path [the routing table will attach to all messages a destination address; col. 5, lines 43 – 57 of Bolmarcich] and channel associated with the message [virtual communication channel may be implemented on the same physical communication media as will be used for the eventual message passing between client tasks and server tasks once the connection is made; col. 6, lines 7 – 21 of Bolmarcich].

21. As to claim 9, Bolmarcich as modified teaches the first application is considered to have been added [add a newly connected client program] to the platform when it is loaded into a volatile memory device on the platform [a message to update the routing table to add a newly connected client program; col. 9, lines 36 – 67 of Bolmarcich].

22. As to claims 10 and 11, Bolmarcich as modified teaches the second application is considered to be executing after the second application is initialized and before it stops running [a protocol can allow both clients and servers to be free running, and rely on both implicit notification and non-blocking notification to inform the clients that they are free to send to the servers; col. 9, lines 20 – 33 of Bolmarcich].

23. As to claims 13 – 17, these are apparatus claims that correspond to method claims 1 – 5; note the rejections to claims 1 – 5 above, which also meet these apparatus claims.

24. As to claims 18, 19, and 21 – 23, these are rejected for the same reasons as claims 8, 7, and 9 – 11 above.

25. As to claim 20, Bolmarcich as modified teaches a monitoring function responsively generating the notify message upon detecting the first application [newly connected client program] has been added to the platform [a message to update the

routing table to add a newly connected client program; col. 9, lines 36 – 67 of Bolmarcich].

26. As to claims 25 – 29, these are product claims that correspond to method claims 1 – 5; note the rejections to claims 1 – 5 above, which also meet these product claims.

27. As to claims 30, 31, 32, and 33 – 35, these are rejected for the same reasons as claims 8, 7, 20, and 9 – 11 above.

28. **Claims 12, 24 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolmarcich as modified by Williams further in view of U.S. Patent NO. 5,539,886 to Aldred.**

29. Examiner notes the reference to Aldred was cited in the previous office action.

30. As to claim 12, 24, and 36, Bolmarcich as modified teaches communication channels [virtual communication channel may be implemented on the same physical communication media as will be used for the eventual message passing between client tasks and server tasks once the connection is made; col. 6, lines 7 – 21 of Bolmarcich] but does not specify a channel handler.

However Aldred teaches [col. 5, line 20 – col. 6, line 13; col. 18, lines 1 – 20] a handler [Port\_event handler] to each channel [communications, channels and ports] and

Art Unit: 2126

each handler processing messages in its assigned channel [more than one event handler may be present and each handles data communications related events].

It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of a channel handler as taught by Aldred to the invention of Bolmarcich as modified because this would allow the data and events sent to the channel to be processed accordingly.

### ***Conclusion***

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent NO. 6,256,678 to Traugher teaches a method for providing a common communications interface between software application programs.

U.S. Patent NO. 6,311,226 to Rosen teaches a method for dynamic negotiation of application names for creating a data link for communication between the applications.

U.S. Patent NO. 5,684,954 to Kaiserswerth teaches a method for providing connection identifier from multiple protocol header.

U.S. Patent NO. 6,154,743 to Leung teaches a method for accessing heterogeneous directory services in an application environment.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen  
Examiner  
Art Unit 2126

lbz  
March 15, 2004

  
**MENG-AL T. AN**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100